ALTA LAKE PRE-REHABILITATION PLAN

PROPOSAL

Justification for Proposed Rehabilitation

- Alta Lake, located two miles southwest of Pateros, Washington is ranked as one of the most popular opening day lakes in Okanogan County. A state park and private resort provide facilities for a number of people both for camping, fishing and day use activities. Recent surveys have indicated that illegal plants of common goldfish have compromised the trout fishery at Alta Lake by directly competing with trout for available food sources. Lake treatment is necessary to restore the lake to trout only waters.

- Primary management of these waters is for trout only.

- Alta Lake was last rehabilitated in October 2002.

Physical Description of Water Proposed for Rehabilitation

- WATER: *Alta Lake*
- LOCATION: *Sections 10 and 15, T29N, R23E, Okanogan Co.*
- SURFACE ACRES: *187*
- MAX. DEPTH: *79*
- VOLUME: *7,293 acre-feet*
- OUTLET: *None*
- STREAM: MILES *N/A* FLOW *N/A*
- PUBLIC ACCESS: *Alta Lake State Park with campsites and boat launch*
- LAND OWNERSHIP: *Public 60%, Private 40%*
- ESTABLISHED RESORTS: *Whistlin' Pine Resort with cabins and boat launch*

Proposed Management Actions

- WATER: *Alta Lake*
- TARGET SPECIES: *Goldfish*
- DATE LAST REHABILITATED: *October 2002*
- PROPOSED TREATMENT DATE: *Oct 2011*
- REPLANTING DATE: *Late-spring 2012*
- SPECIES: *Rainbow*
- STOCKING: *15,000 catchable rainbow, 30,000 fingerling rainbow*
- PROPOSED TOXICANT: *Rotenone, powder and liquid*
- CONCENTRATION: *4 ppm*
- AMOUNT (ROTENONE AT 5% ACT. INGRED): *78,764 lbs, 30 gal liquid*
- METHOD OF APPLICATION: *pumper boats - slurry and spray; ATV with sprayer; small boat with small sprayer, backpack sprayers*
- CREW DESCRIPTION: *Leader Robert Jateff, Personnel 12-15*

PURPOSE

- Alta Lake has been managed as quality trout waters since the 1980's. Complete rehabilitation is the only feasible method of restoring this lake to a trout only management scheme. Removal of all competing species is the goal of the rehabilitation.

INTENDED OUTCOME/MEASURE OF SUCCESS

- We intend to restore Alta Lake to its historic trout fishery, and improve its popularity by maintaining good quality trout throughout the duration of the season. Success of this measure will be apparent during annual creel surveys and population sampling. Given a reasonable chance of eliminating the populations of undesirable species, the beneficial effects should be noticeable one-two years post treatment.

RESOURCE IMPACTS

- Target species: goldfish

- District and Regional Habitat, Wildlife and Non-Game biologists have been contacted on our rehabilitation plans. Their concerns with water quality and effects on wildlife post-rehabilitation have been discussed and will be addressed.

- According to Bradbury (1986), the effects of rotenone on benthos are variable, depending on the concentrations and species. Crustaceans are most tolerant while the smaller insects are most affected. Immediate reduction of the population averages 25% and survival doubles when access to bottom sediments exists. Benthic communities generally recover to at least pretreatment levels within two months. Zooplankton is more severely impacted, and communities generally take two to twelve months to fully recover. While relatively tolerant of even heavy doses of rotenone, amphibians (especially larval) are at risk, and herptiles are affected somewhat less so.

- Participation in the trout fisheries should exceed that currently found for existing fisheries. The water in the lake is used for recreation and irrigation purposes. Dead fish along the shoreline will not be a public nuisance since the lake will be closed to fishing.

MITIGATING FOR ADVERSE IMPACTS

- Trout survival and growth will be greatly enhanced. No removal of dead fish is planned as the nutrient base contained therein is best returned to the lake. Disturbance of waterfowl during treatment or by the anticipated fishery will be offset by increased food availability as the uncontrollable numbers of spiny-rayed fishes are eliminated in favor of easily balanced populations of trout.

- Water will be confined to the lake proper, and treatment will be conducted in the fall when the lake is at its lowest level and after the general hunting season so that there are fewer people near treatment area.

- Protective gear for the eyes, face, hands and clothes will be supplied on-site for all purveyors of rotenone.

- The lake will be posted according to Department of Ecology guidelines to notify the public of the treatment and discourage the public from possessing or consuming dead fish. The landowners will be notified of the rehabilitation and consequent exposure of livestock to rotenone.

RECREATIONAL IMPACT

- Recreational angling opportunity will be increased if the undesirable species are removed from Alta Lake. The level of participation will dwindle to almost nothing if no action is taken immediately. Given the success of the planned management action, as many as 5,000 fishing days are estimated for the season. Anglers should average 3-4 fish per day within the 10”-12” range, with one carryover trout 14-15 inches.

ECONOMIC IMPACTS

- Rehabilitation would restore the fishery and associated economic activity. An estimated 5,000 angler trips will be made to Alta Lake as a result of the proposed management action, with an economic impact of $660,000 per year (2004 dollars; based on WDW estimate of $132 per trip). Fingerling/catchable fish plants will cost the agency $5,000 and can be easily accomplished under current hatchery programs.

- The cost of treatment will be approximately $100,000, but the increase in license sales and subsequent boost to the local economy will more than offset that loss within two-three years after treatment.

RELATED MANAGEMENT ACTION

- Approximately 30,000 fingerling rainbow trout and 15,000 catchable rainbow will be stocked the first spring, with fingerling rainbow trout being the only plants in the following years. Creel checks will be done annually on Alta Lake, as well as monitoring for invasive species. Aggressive techniques will be employed when competing species are first noticed, to help in controlling the population and to reduce the possibility of any future rehab.

PUBLIC CONTACT

- Public concern over the increasing number of lakes in Okanogan County with undesirable species infestations prompted this action.

- A public meeting will be held in July to discuss the treatment proposal. Letters will also be sent to all property owners as well as water rights holders.

Initiated by: Region Two Fisheries Management